



## Complete Summary

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### TITLE

Care coordination (CC): proportion of children needing more than one health care service who received coordinated care.

### SOURCE(S)

Bethell C, Peck C, Schor E. Assessing health system provision of well-child care: the Promoting Healthy Development Survey. Pediatrics2001 May;107(5):1084-94. [PubMed](#)

Bethell C, Reuland CH, Halfon N, Schor EL. Measuring the quality of preventive and developmental services for young children: national estimates and patterns of clinicians' performance. Pediatrics2004 Jun;113(6 Suppl):1973-83. [PubMed](#)

Child and Adolescent Health Measurement Initiative (CAHMI). Promoting healthy development survey - PLUS (PHDS-PLUS). Portland (OR): CAHMI - The Child and Adolescent Health Measurement Initiative; various p.

Child and Adolescent Health Measurement Initiative (CAHMI). The promoting healthy development survey. Portland (OR): CAHMI - The Child and Adolescent Health Measurement Initiative; 2001. 16 p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Patient Experience

## Brief Abstract

### DESCRIPTION

This measure is used to assess the proportion of children needing more than one health care service who received coordinated care.

## **RATIONALE**

Coordinated care is an important and recommended aspect of quality health care for those children in need of care or services from more than one service provider. This aspect of care is vital to improved quality and consistency of care for children with special health care needs and is properly measured when collected from the parent. Children with special health care needs may require differing levels of service from multiple health care providers as well as a coordinated effort among schools and child care providers, in order to offer for the highest level of care possible. Few standardized quality measures are available that provide specific information about preventive health care for young children, especially on aspects of care for which parents and families are a reliable source of information about the quality of their child's health care. A majority of the measures currently used provide information about whether children come in for well-child visits (access to care measures) or are based on medical chart reviews which are not accurate for the specific level of information obtained in the Promoting Health Development Survey (PHDS).

## **PRIMARY CLINICAL COMPONENT**

Care coordination

## **DENOMINATOR DESCRIPTION**

Children age 3 months to 48 months who needed care from multiple health care providers or used more than one service, who received a well-child visit in the last 12 months, and whose parent answered the item in the "Care Coordination (CC)" scale on the Promoting Healthy Development Survey (PHDS)

## **NUMERATOR DESCRIPTION**

Children whose parent responded, "Yes" to the item in the "Care Coordination (CC)" scale (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

### **Evidence Supporting the Measure**

## **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- Focus groups
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

### **Evidence Supporting Need for the Measure**

## **NEED FOR THE MEASURE**

Overall poor quality for the performance measured  
Use of this measure to improve performance

## **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

Bethell C, Peck C, Abrams M, Halfon N, Sareen H, Scott Collins K. Partnering with parents to promote the healthy development of young children enrolled in Medicaid: results from a survey assessing the quality of preventive and developmental services for young children enrolled in Medicaid in three states. New York (NY): Commonwealth Fund; 2002 Sep. 53 p.

Bethell C, Peck C, Schor E. Assessing health system provision of well-child care: the Promoting Healthy Development Survey. Pediatrics 2001 May;107(5):1084-94.  
[PubMed](#)

## **State of Use of the Measure**

### **STATE OF USE**

Current routine use

### **CURRENT USE**

Collaborative inter-organizational quality improvement  
External oversight/Medicaid  
Internal quality improvement  
National reporting  
Quality of care research

## **Application of Measure in its Current Use**

### **CARE SETTING**

Ambulatory Care

### **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Advanced Practice Nurses  
Nurses  
Physician Assistants  
Physicians

### **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Individual Clinicians

### **TARGET POPULATION AGE**

Children age 3 months to 48 months

**TARGET POPULATION GENDER**

Either male or female

**STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

**Characteristics of the Primary Clinical Component****INCIDENCE/PREVALENCE**

Unspecified

**ASSOCIATION WITH VULNERABLE POPULATIONS**

Unspecified

**BURDEN OF ILLNESS**

Unspecified

**UTILIZATION**

Unspecified

**COSTS**

Unspecified

**Institute of Medicine National Healthcare Quality Report Categories****IOM CARE NEED**

Staying Healthy

**IOM DOMAIN**

Effectiveness  
Patient-centeredness

**Data Collection for the Measure****CASE FINDING**

Users of care only

**DESCRIPTION OF CASE FINDING**

Children age 3 months to 48 months who needed care from multiple health care providers or used more than one service and who received a well-child visit in the last 12 months

## **DENOMINATOR SAMPLING FRAME**

Patients associated with provider

## **DENOMINATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Children age 3 months to 48 months who needed care from multiple health care providers or used more than one service, who received a well-child visit in the last 12 months, and whose parent answered the item in the "Care Coordination (CC)" scale on the Promoting Healthy Development Survey (PHDS)

### **Exclusions**

Unspecified

## **RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are equally eligible to appear in the numerator

## **DENOMINATOR (INDEX) EVENT**

Encounter

Patient Characteristic

## **DENOMINATOR TIME WINDOW**

Time window precedes index event

## **NUMERATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Children whose parent responded, "Yes" to the item in the "Care Coordination (CC)" scale

From the responses, a composite measure score is calculated\* in which a higher score is associated with better quality.

**\*Note:** Scoring process:

1. Individual items are recoded so that "Yes" responses are recoded into 100, "No" responses are recoded into 0, and "Child did not get care from different providers or use more than one service" responses are recoded into missing.

### **Exclusions**

Unspecified

## **MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

### **NUMERATOR TIME WINDOW**

Encounter or point in time

### **DATA SOURCE**

Patient survey

### **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

### **PRE-EXISTING INSTRUMENT USED**

Unspecified

## **Computation of the Measure**

### **SCORING**

Non-weighted Score/Composite/Scale

### **INTERPRETATION OF SCORE**

Better quality is associated with a higher score

### **ALLOWANCE FOR PATIENT FACTORS**

Analysis by high-risk subgroup (stratification on vulnerable populations)  
Analysis by subgroup (stratification on patient factors, geographic factors, etc.)

### **DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS**

Although no stratification is required, the Promoting Healthy Development Survey (PHDS) includes a number of variables that allow for stratification of the findings by possible vulnerability:

- Child demographic characteristics (e.g., the child's age, race)
- Child health and descriptive characteristics (e.g., children at high risk for developmental, behavioral or social delays, special health care needs)
- Parent health characteristics (e.g., children whose parents are experiencing symptoms of depression)

## **STANDARD OF COMPARISON**

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

### **Evaluation of Measure Properties**

## **EXTENT OF MEASURE TESTING**

### **1999: Pilot Testing by Mail in Three Health Plans**

- Psychometric analyses demonstrated that the Promoting Healthy Development Survey (PHDS) quality measure scales have strong construct validity and internal consistency (reliability). Findings are displayed in the article, "Assessing Health System Provision of Well-child Cared: the Promoting Healthy Development Survey."
- In-depth cognitive testing of the draft survey was conducted with 15 families representing a range of socioeconomic and demographic groups, as well as different types of health insurance coverage, age of child, age and sex of parent, and number of children in family. Survey design and formatting was finalized with input from a group of experts and family representatives. Reliability assessments indicated the PHDS to be written at the 8th-9th grade reading level. Cognitive testing confirmed the readability of the PHDS for people across a range of educational levels.

### **2000: Implementation by Mail to Medicaid Clients**

- Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the CAHMI Report, "Summary Testing and Findings of the PHDS in Maine."

### **2000: Implementation by Mail to Washington Medicaid Clients**

- Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the CAHMI Report, "PHDS Results: In Washington State."

### **2000-2001: Implementation by Telephone Three-State Medicaid Clients**

- Cognitive interviews were conducted with 20 parents of children 3 to 48 months old who were enrolled in Medicaid. Five of these interviews were conducted in-person; the remaining 15 were conducted over the telephone in order to assess the response burden and cognitive ease of the PHDS when using a telephone administration. Using behavior coding methods, for each item in the PHDS, instances where the respondent required clarification or did not appropriately answer an item were noted. Also, items where the interviewer had difficulty asking the question without edits to the wording

- were noted. Survey modifications were made based on findings in order to improve the reliability, validity and cognitive ease of the PHDS items.
- The PHDS was administered by telephone to parents in 3 state Medicaid programs.
  - Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the report, "Partnering with Parents to Promote the Healthy Development of Young Children Enrolled in Medicaid."

### **2000: A Majority of the PHDS Included in the National Survey of Early Childhood Health (NSECH)**

- Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the article, "Measuring the quality of preventive and developmental services for young children: National estimates and patterns of clinicians' performance."

### **2001-2003: Development and Implementation of the Provider-Level PHDS. October 2001-March 2003**

- Focus groups and cognitive interviews with 35 health care providers in Vermont and Washington and 20 parents of young children in Vermont to inform item-reduction, administration specifications, and reporting templates.
- Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the CAHMI reports, "Overview of the Round 1 Implementation of the PHDS in Mousetrap" and "University Pediatrics: Round 2 -- In-Office Implementation of the PHDS Key Findings."

### **2002-2004: Implementation by Telephone in Four Medicaid Agencies**

- Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the CAHMI report, "Hearing the Voices of Parents: Results from a Survey Assessing the Quality of Preventive and Developmental Services for Young Children Enrolled in Medicaid in Four States."

### **December 2003 - March 2004 Implementation of the PHDS in Kaiser Permanente, System, Office and Provider-Level Analysis Conducted**

- Psychometric analyses demonstrated that the PHDS quality measure scales have strong construct validity and internal consistency (reliability). These findings are displayed in the draft publication, "What drives the quality of preventive and development services provided to young children? Findings from a multi-level, provider and patient-centered method to assess quality."

## **EVIDENCE FOR RELIABILITY/VALIDITY TESTING**

Bethell C, Peck C, Abrams M, Halfon N, Sareen H, Scott Collins K. Partnering with parents to promote the healthy development of young children enrolled in



Medicaid: results from a survey assessing the quality of preventive and developmental services for young children enrolled in Medicaid in three states. New York (NY): Commonwealth Fund; 2002 Sep. 53 p.

Bethell C, Peck C, Schor E. Assessing health system provision of well-child care: the Promoting Healthy Development Survey. Pediatrics 2001 May;107(5):1084-94. [PubMed](#)

Bethell C, Peck C. CAHMI quality measures: promoting healthy development survey. Summary of testing and findings in Maine. Portland (OR): Child and Adolescent Health Measurement Initiative (CAHMI); 2000 Sep. 51 p.

Bethell C, Reuland CH, Halfon N, Schor EL. Measuring the quality of preventive and developmental services for young children: national estimates and patterns of clinicians' performance. Pediatrics 2004 Jun;113(6 Suppl):1973-83. [PubMed](#)

Child and Adolescent Health Measurement Initiative (CAHMI). Child and adolescent health measurement initiative: Washington State Healthy options. Promoting healthy development survey (PHDS): 2000 results. Portland (OR): Child and Adolescent Health Measurement Initiative, Foundation for Accountability; 2000. 59 p.

Child and Adolescent Health Measurement Initiative (CAHMI). Overview of the round 1 implementation of the PHDS in mousetrap and university pediatrics. Portland (OR): Child and Adolescent Health Measurement Initiative (CAHMI); 27 p.

Child and Adolescent Health Measurement Initiative (CAHMI). What drives the quality of preventive and development services provided to young children? Findings from a multi-level, provider and patient-centered method to assess quality. Portland (OR): Child and Adolescent Health Measurement Initiative (CAHMI); 2006. 38 p. [60 references]

Reuland C, Bethell C. Hearing the voices of parents: measuring and improving preventive and developmental services provided to young children. Portland (OR): Child and Adolescent Health Measurement Initiative (CAHMI); 2004 Jun. 97 p.

## Identifying Information

### ORIGINAL TITLE

Care coordination (CC).

### MEASURE COLLECTION

[Promoting Healthy Development Survey \(PHDS\)](#)

### MEASURE SET NAME

[Care Coordination \(CC\)](#)

**DEVELOPER**

Child and Adolescent Health Measurement Initiative

**FUNDING SOURCE(S)**

The Commonwealth Fund

**COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE**

Christina Bethell, PhD, MBA, MPH; Colleen Reuland, MS; Brooke Latzke, BS

**FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

None

**ENDORSER**

National Quality Forum

**ADAPTATION**

Measure was not adapted from another source.

**RELEASE DATE**

2001 Jan

**REVISION DATE**

2006 Dec

**MEASURE STATUS**

This is the current release of the measure.

**SOURCE(S)**

Bethell C, Peck C, Schor E. Assessing health system provision of well-child care: the Promoting Healthy Development Survey. *Pediatrics* 2001 May;107(5):1084-94. [PubMed](#)

Bethell C, Reuland CH, Halfon N, Schor EL. Measuring the quality of preventive and developmental services for young children: national estimates and patterns of clinicians' performance. *Pediatrics* 2004 Jun;113(6 Suppl):1973-83. [PubMed](#)

Child and Adolescent Health Measurement Initiative (CAHMI). Promoting healthy development survey - PLUS (PHDS-PLUS). Portland (OR): CAHMI - The Child and Adolescent Health Measurement Initiative; various p.

Child and Adolescent Health Measurement Initiative (CAHMI). The promoting healthy development survey. Portland (OR): CAHMI - The Child and Adolescent Health Measurement Initiative; 2001. 16 p.

## **MEASURE AVAILABILITY**

The individual measure, "Care coordination (CC)," is published in "Promoting Healthy Development Survey (mail version)," and "Promoting Healthy Development Survey - PLUS (PHDS-PLUS) (telephone version)." This survey is available from the [Child and Adolescent Health Measurement Initiative \(CAHMI\) Web site](#).

For further information, please contact the Child and Adolescent Health Measurement Initiative (CAHMI) at: 707 SW Gaines Street, Portland, OR 97239-3098; Phone: 503-494-1930; Fax: 503-494-2473; Web site: [www.cahmi.org](http://www.cahmi.org).

## **COMPANION DOCUMENTS**

The following are available:

- Child and Adolescent Health Measurement Initiative (CAHMI). The promoting healthy development survey: implementation guidelines. Portland (OR): CAHMI - The Child and Adolescent Health Measurement Initiative, Oregon Health & Science University; 179 p. This document is available in Portable Document Format (PDF) from the [Child and Adolescent Health Measurement Initiative \(CAHMI\) Web site](#).
- Child and Adolescent Health Measurement Initiative (CAHMI). The promoting healthy development survey - PLUS: implementation guidelines. Portland (OR): CAHMI - The Child and Adolescent Health Measurement Initiative, Oregon Health & Science University; 320 p. This document is available in PDF from [CAHMI Web site](#).

## **NQMC STATUS**

This NQMC summary was completed by ECRI Institute on June 26, 2007. The information was verified by the measure developer on September 19, 2007.

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